Sustainable business model innovation for positive societal and environmental impact

Chapter 10

Sustainable business model innovation for positive societal and environmental impact

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Abstract

Tackling global challenges requires a more holistic view of doing business, by integrating sustainability into the core of business practices. The challenges to the business community regard not only the aim of remaining competitive; they are about creating a new role for business in society, as a solution to our biggest global challenges. A range of businesses are preparing to take responsibility for resolving some of these challenges. New sustainable business model archetypes are emerging. Ultimately, "shared value creation" is about the need to involve key stakeholders, including representatives of environmental groups and society as a whole in the early stages of the innovation process. Although tools such as stakeholder and value mapping to assist sustainable business model innovation are emerging, more work is required from society, government, and the business community in creating and assessing multiple, sustainable values through businesses, as part of a wider system of stakeholders.

10.1 Sustainable innovation and shared value creation

Global challenges such as climate change, scarcity of resources, and the economic crisis have been affecting our current economic and social system, and as a result also businesses and their operations. While industry has brought prosperity, it has also been a root cause of some of these key challenges. Aware of their negative externalities and driven by legislation, businesses have slowly started to internalise some of their negative externalities, through pollution control and waste reductions. After the publication of the "Limits to growth" (Meadows, 1972), "Our common future" (Brundtland, 1987) and "Cannibals with forks" (Elkington, 1997) reports, businesses started to incorporate sustainability in their strategy by adopting a "Triple-P" (People, Planet, Profit) or Corporate Social Responsibility (CSR) approach.

Unfortunately, "sustainability" and CSR have also been misused as marketing and PR tools, and sustainability has not always been incorporated properly into the core of businesses. Efforts regarding "eco-efficiency", efficiency improvements with environmental benefits, and awareness of social and environmental issues in supply chains are common, but businesses model innovations to fully incorporate sustainability are not. As such, CSR efforts have not yet improved the social and environmental impact of businesses (Porter and Kramer 2006) as fully as they could have. Porter argues that companies must take the lead in bringing business and society back together (Porter and Kramer, 2011). This should be done on the principle of shared value, which involves creating economic value in a way that also creates value for society, by addressing its needs and challenges. Shared value creation acknowledges trade-offs between short-term profitability and social or environmental goals, but focuses more on the opportunities to derive competitive advantages from building a social value proposition into corporate strategies. Creating value for different stakeholders (e.g. employees, suppliers, local communities) seems to pay off for multinationals such as Philips and Unilever, which have developed innovations for the Bottom of the Pyramid (the largest, but poorest socio-economic group), and involved local communities in the value chain. "Shared value" offers many opportunities for innovation and growth, by tackling social and environmental problems as core business objectives.

Tackling global challenges requires a more holistic view of doing business, by integrating sustainability into the core of business practices. It is not about changing particular aspects of a business, but about fundamentally changing the way business is done at all levels, to ensure a positive influence on society and the environment (Bocken et al., 2015). It includes the transformation of our global systems and infrastructures, so that businesses are incentivised to operate in a sustainable way. It is about the integration of the three dimensions of sustainability – social, environmental, and economic (Elkington, 1997) – into the way business is done, in a manner that balances and aligns value creation for all stakeholders, including the environment and

society, at all levels and through all activities (Stubbs and Cocklin, 2008; Boons and Lüdeke-Freund, 2013; Bocken et al., 2013). As Freeman (2010) quoted: "Stakeholders are about the business and business is about the stakeholders". Freeman (2010) explained that according to "stakeholder theory", businesses should create value with and for all stakeholders – suppliers, customers, employees, financiers, and communities – and that all stakeholders are related and interdependent.

The stakeholder notion has clear links to the open innovation concept, where corporate innovation activities are organised more like an "open system" rather than the twentieth-century model of vertical integration, under the assumption that sources of innovative ideas often come from outside firms (Chesbrough 2006). Firms can enrich their innovation practices by "internalising" external technologies, seeking new markets through licensing technologies (ibid.), and finding promising ways to collaborate with others to innovate, whether these are sustainable businesses or NGOs.

10.2 A new collaborative role for business in society

The challenges to businesses concern not only remaining competitive; they are about creating a new role for business in society, as a solution to our biggest global challenges. As described in the working paper on Transformative Social Innovation Theory (Avelino et al., 2013), our society faces "game-changing" macro-phenomena, such as the economic crisis, climate change and ICT developments with various "narratives of change" or "counter-movements" such as the "new economy" (sharing economy or circular economy), which has its effects at different levels and on system innovations and social innovations (new design, new forms of ownership and business models). These all influence the current process of societal transformation. Jonker (2014) argues that we live in a transition phase to another type of society (2014) where organisations are changing by striving for multiple value creation. Other ways of organising and networking are necessary. It is about emphasising organisations' "collaboration ability and capability", rather than their organisational abilities. Businesses are no longer necessarily in the lead, as a result of more bottom-up collaborative innovation in society (e.g. peer-to-peer business models such as peer-to-peer lending). There will be a shift towards collective co-creation and multiple shared value creation, with people collaborating across organisations instead of merely within organisations. Those people, who purposefully connect businesses and industries through collaboration, the so-called "extrapreneurs", will function as the "brokers".

In this "new society", businesses and other organisations will find new ways of creating value driving their business innovations and enhancing "open innovations". Social innovation and social entrepreneurship will be stimulated. Together, this will create value for the public. It is important for society, government, and business that research is done into creating and assessing multiple, sustainable values through

businesses as part of a wider system of stakeholders. New ways of thinking are required, where environmental and societal concerns are as important as individual customer gains or an individual firm's profitability. Ultimately, "shared value creation" (Porter & Kramer, 2011) is about the need to involve key stakeholders, including representatives of environmental groups and society (e.g. local communities) in the early stages of the innovation process. This means that the potential users of a product or process, or, more broadly, a business model, are no longer mere "receivers" of such innovations, but are actively included in the innovation process to optimise the outcome for all. Although this may seem idealistic, several businesses are already taking a more inclusive, collaborative, and sustainable approach to doing business (see box 10.1 below).

Box 10.1 Sustainable business approaches

Social enterprises such as "Solar Sister" and "Sunny Money" take an inclusive approach to doing business, involving local community members as entrepreneurs and making solar-based energy and technologies more accessible.

In the for-profit domain, several businesses are adopting more sustainable business models. SolarCity in the US is making solar energy more affordable and accessible. Car sharing, power tool sharing, house sharing, and other "sharing schemes" can create a community feel and drive good behaviours (e.g. reducing car use; reducing the need to own "stuff"). Seats2meet.com, by origin a supplier of meeting rooms, aspires to create shared value for multiple stakeholders through its new business model. Seats2meet.com uses its knowledge and events to enable sharing of unused spaces and connect knowledge workers from organisations and self-employed people.

Large businesses such as Unilever and Interface try to involve local communities in their value chains and ensure they benefit from the way they do business, and Philips wants to create conflict-free value chains. Together with the Electronic Industry Citizenship Coalition and the Global eSustainability Initiative Extractives Work Group, Philips and other businesses in the industry have created a Conflict-Free Smelter programme by organising multi-stakeholder sessions. Smelters can demonstrate that the raw materials they procure do not originate from sources that contribute to conflict in the Democratic Republic of Congo, and suppliers are able to source metals from conflict-free smelters. Philips' Conflict-Free Tin Initiative, to stimulate cooperation and economic growth in the region outside the control of rebel forces, can ensure a more broadly controlled conflict-free supply chain of tin.

An example of a public-private partnership is “Het Groene Net”, a local sustainable energy company being set up in the south of the Netherlands, which, through an underground pipe network, uses renewable heat from Biomass Energy Sittard and waste heat from the industrial site called Chemelot for heating and cooling homes and businesses in different local municipalities. Businesses, buildings, and homes that are connected to “Het Groene Net” save on their energy costs and owners do not need to invest or reinvest in heating or cooling. This construction was an intensive co-creation process with many stakeholders, and is an example of “industrial symbiosis”, where collaboration results in “waste” (e.g. heat, CO_2) being turned into a “resource”.

10.3 Sustainable business

It may be clear that pressures on businesses to operate more sustainably are increasing, requiring them to adopt a systemic approach that integrates consideration of the three dimensions of sustainability – social, environmental, and economic – in a way that generates shared value creation for all stakeholders, including the environment and society. This can be referred to as “sustainable business thinking” (Bocken et al., 2015). Ansari et al. (2013) identified three high-level steps that we need to go through to resolve the “Tragedy of the Commons”: issues related to our global resource use, climate change, and water use that are not easy to resolve because they are shared and used by all global citizens without clear ownership and responsibility. These steps are: (1) recognition of the interconnected fate; (2) acceptance of responsibility by all; (3) collective commitment to act. If key stakeholders, whether businesses, citizens, or governments, fail to meet some, or even worse, all of these conditions, it will be hard to find solutions to pressing global challenges such as climate change. For example, at the time of writing, no binding global agreements to resolve climate change have been established, which is standing in the way of mitigating global change. However, individual countries such as the UK and the US, as well as the EU, have established specific carbon emissions targets.

Fortunately, as described above, a range of businesses are preparing to take responsibility for resolving some of these global challenges, and a few examples of these have already been given above. Forward-looking businesses such as Vitsœ (durable furniture) and Patagonia (an outdoor gear brand) are questioning our consumption patterns, and accept slow growth and stability as a reality rather than fast-paced sales and over-consumption. The outdoor gear producer Patagonia, through its firm “Patagonia Provisions”, also wants to bring back wild salmon and improve the land on which it grows food, rather than exhausting it. Home improvement retailer Kingfisher aims to plant more trees than it uses for the goods it sells through its retail business. Carpet manufacturers such as Interface and Desso, in collaboration with

various partners such as the Zoological Society of London, local communities in Asia, and supplier Aquafil, source waste from the sea and help turn this into new materials and products as part of the "Healthy Seas" initiative. AB Sugar, the biggest sugar refiner in Great Britain, is now the biggest tomato grower as well, by turning the waste (latent heat and CO_2) from its Wissington factory into value, piping them into greenhouses to grow tomatoes (Short et al., 2014). This is only one of its innovations to create "value from waste" (ibid.). "Women on Wings" combines the Dutch knowledge of suitable business models and product design with the products that Indian women make in rural areas, and assists these women in starting their own business, from production to sales. Airbnb connects owners of houses or apartments online with tourists and others seeking short-term accommodations, which can support the local economy and help homeowners pay their bills in financially difficult times. In "sharing models" such as Airbnb and Couchsurfing (home sharing) and Blablacar and Buzzcar (car sharing), trust is very important, which is facilitated by peer review, a model which had already been tested and used by companies such as Ebay and other peer-to-peer online market places for some time. Sharing, perhaps not surprisingly, has the benefit of creating economic, environmental, and societal shared value. Although they are not perfect – for example, lawsuits have been filed against various "sharing businesses", predominantly by incumbent businesses in the industry, for not following industry rules and regulations – these businesses are creating a shift in existing dominant business models by challenging how business is done.

Still, "sustainable business thinking" is not yet common practice in everyday business operations, whereas it can be very beneficial to businesses. This is perhaps because of the challenges of incorporating societal, environmental, and economic concerns into the way business is done. Crane et al. (2014) in their critique of the concept of "shared value creation" argue that this concept might be challenging to realise: shared value opportunities are not always evident, but rather manifest themselves in terms of dilemmas. It therefore depends on the creativeness of decision makers to spot sustainable shared value creation opportunities and to develop these into good business opportunities. Still, sustainable business models, which incorporate environmental and societal concerns into the business model in addition to profits, and consider benefits for a network of stakeholders rather than just one business (Stubbs & Cocklin, 2008) seem to pay off for those engaged in them. A joint study by MIT Sloan Management Review and the Boston Consultancy Group found that nearly 50% of the businesses they surveyed had changed their business model because of sustainability opportunities (Kiron et al., 2013). The majority of these businesses said that "sustainability" provided additional profits (ibid.). Opening up new business opportunities and cost savings are examples of economic benefits of sustainable business model innovations. Considering environmental (and societal) concerns at early stages of the innovation process is essential, because once product specifications have been decided upon, only minor changes to the sustainability of the product can be made (Bocken et al., 2014).

10.4 Business model innovation and value mapping

Business models broadly define "how business is done" (Magretta, 2002). A business model is a useful framework for system-level innovation for sustainability, because it provides the linkage between a firm's key activities, such as design, production, supply chains, partnerships, and distribution channels (Bocken et al., 2015). Hence, the business model can provide a useful perspective for encouraging "sustainable business thinking".

What tools could help businesses innovate their business models? Value mapping is an approach developed for sustainable business modelling, the development of new sustainable business models, or adapting current business models for sustainability (Bocken et al., 2013). Value mapping aims to inspire innovation by helping companies consider the value that is missed or destroyed for their key stakeholders by the way business is done (Bocken et al., 2014a; 2015). Specifically, "society" and "the environment" are considered to be key stakeholders (Stubbs & Cocklin, 2008). Having considered the value missed (e.g. through waste or overcapacity) and destroyed (e.g. by pollution or deforestation) for those key stakeholders, companies can start thinking about new forms of sustainable value creation. A simple "value map" has been developed to highlight those forms that are of value to multiple stakeholders. Figure 10.1 shows an example of such a value map, which was used during a session with students aiming to develop sustainable business models for the clothing industry. Generally speaking, the value mapping process aims to help businesses find new ways of achieving more inclusive shared value creation by considering key stakeholders and including "society" and "the environment" as key stakeholders. It is about taking responsibility for our "Commons" in the way business is done (Ansari et al., 2013).

The process of value mapping (Bocken et al., 2013) can thus help to promote wider sustainable business thinking and shared value creation. It consists of a few simple steps:

1) Consider the purpose of the business and the value it currently captures for a range of stakeholders.
2) What value is being destroyed for key stakeholders? For instance, are resources being depleted, is pollution being created or are stakeholders being exploited? These might be referred to as "negative externalities" in conventional economics, but we found the term "value destroyed" far more effective to make it clear that valuable resources are being destroyed.
3) Consider the value missed for the key stakeholders. Where are resources or skills being wasted? Where is there a failure to capture financial value or added value that needs to be addressed?
4) Having gone through this process in sequence, it is time to start thinking about new opportunities. Aware of the value missed and destroyed for key stakeholders, businesses can start thinking about new opportunities for shared value creation.

Going through such a process, as an individual business, or better, as a business in collaboration with key stakeholders, can help provide businesses with new insights for sustainable business model innovation.

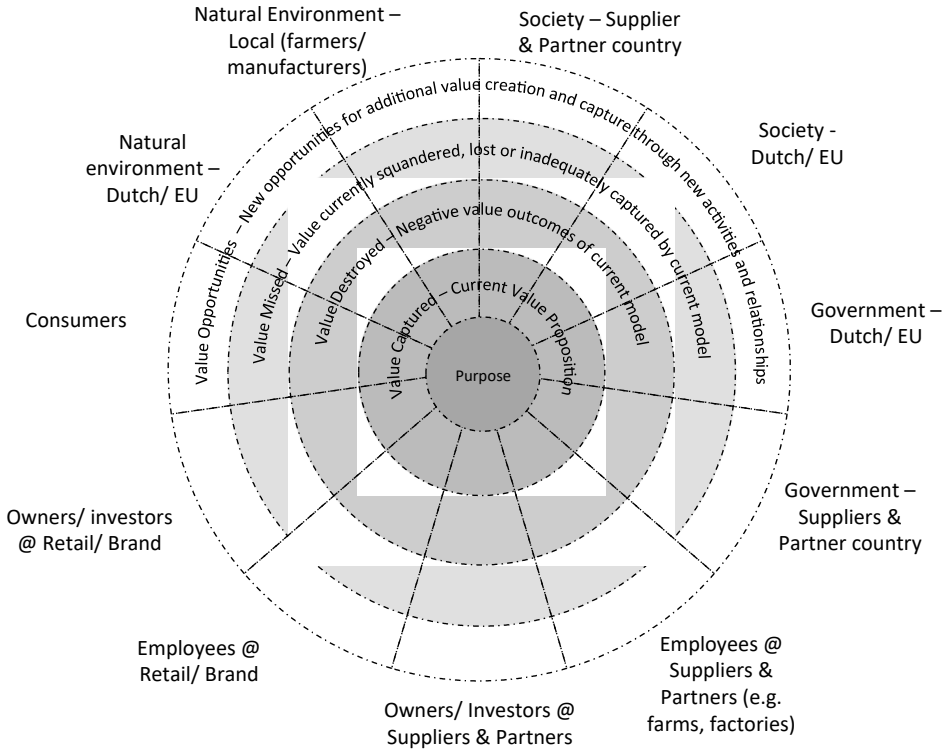

Figure 10.1 Value map used during an educational workshop
Source: developed from Short et al. (2012) and Bocken et al. (2013; 2015)

10.5 Examples of sustainable business model innovations

What might sustainable business models look like? Sustainable business model innovations can be more technologically focused (e.g. moving from fossil fuels to solar energy), more social (e.g. providing community benefits and benefits for workers), or more organisational (e.g. changing the purpose towards sustainability) (Boons and Lüdeke-Freund, 2013; Bocken et al., 2014b). Within this classification, there might be several options. A range of sustainable business model archetypes (Bocken et al., 2014b) have been developed in the literature (see Figure 10.2). Together, these build up a sustainable business model.

Figure 10.2 Sustainable Business Model Archetypes
Source: Bocken et al., (2014b); image and interactive framework available at: www.planc.eu/bmix

Briefly, the eight sustainable business model archetypes are:

1) Resource use optimisation and prevention – Examples of resource use optimisation include doing more with fewer resources, generating less waste, emissions, and pollution to enhance efficiency and save costs. Lean manufacturing but also clever design using limited resources to deliver a function and multi-functional design.
2) Circularity or closing resource loops – options for turning waste into new useful resources and making better use of under-utilised capacity to reduce costs and generate new revenue streams. Two examples are the aforementioned "industrial symbiosis" examples of "Het Groene Net" and AB Sugar's Wissington factory.
3) Substitution with renewables – Environmental impacts can be reduced and business resilience increased by addressing resource constraints associated with non-renewable resources and current production systems to reduce finite resource use, waste, and pollution. Examples of substituting with renewables include solar businesses such as SolarCity and Sunny Money.
4) Functionality, not ownership - Providing services that satisfy users' needs without having to own physical products, in order to reduce the total needs for physical products and encourage the right behaviours among businesses and consumers. Examples include laundrettes and clothing rental services (e.g. the start-ups Rentez-Vous and the Dutch "Kledingbibliotheek".
5) Stewardship – Proactively engaging with all stakeholders to ensure the long-term health and wellbeing of the planet (e.g. watersheds, forests) and society (e.g. happiness, health). Examples include choice editing by retailers (e.g. banning unethically sourced meat or unsustainably caught fish) and ethical trade.
6) Slowing consumption rates – Solutions that actively seek to reduce consumption, and hence production, in order to reduce resource consumption, encourages sustainable living, and long-term customer loyalty, and open up new repair and service markets. Examples include Energy Service Companies (ESCOs), incentivising

customers to use less energy, and durable but more premium brands which try to encourage slower consumption (e.g. Vitsœ and Patagonia as discussed above).

7) Co-creation – Innovations focusing on pooling and sharing resources, knowledge, ownership, and wealth creation to leverage resources and talents and create new business opportunities. Good examples include peer-to-peer car- and home-sharing models and peer-to-peer lending.
8) Social entrepreneurship – Creating options to generate social value – not wealth – is the central criterion for a successful social entrepreneur delivering positive societal and environmental value and securing resource capacity for long-term business viability. Examples include social enterprises and benefit (B-) corporations, where societal benefits of the business are central to the purpose.

In isolation, these archetypes can contribute to higher levels of sustainability, but a much more powerful opportunity will be to combine multiple business model innovations or archetypes. For example, in the aforementioned example of SolarSister, the model combines social entrepreneurship and substitution with renewables: it wants to address the role of women in society by improving their skills base, while replacing fossil fuel based technologies with solar-based ones. In the case of another "solar example", SolarCity, this US-based business offers solar energy without the high upfront cost of solar panels, by selling energy contracts to customers and installing the solar panels for free. This makes solar energy much more accessible and affordable for a wider range of customers.

10.6 Towards sustainable businesses

Several businesses are starting to reap the benefits of sustainable business model innovation (Kiron et al., 2013). Although no business is perfect yet, there are several positive signs of businesses transforming to create benefits not only for themselves and their shareholders, but also for a much wider range of stakeholders. Tools such as value mapping and examples such as the sustainable business model archetypes might help businesses get ahead in the process of sustainable business model innovation. Inclusive or more shared ways of creating value, through collaborations between businesses, citizens, and governments can be an important driver of sustainable business model innovation to address our global common issues. When the mind-set is there, and companies feel responsible and committed to act (Ansari et al., 2013), they can really contribute to solving environmental and societal issues, rather than being the cause of them. The three generic steps of (1) recognising the issue, (2) accepting individual responsibility in a big global issue and (3) committing to act (Ansari et al., 2014) need to be combined with an essential fourth one: (4) acting upon this. The four steps might sound simple, but each depends on the commitment of individuals or groups of

individuals (e.g. policy makers, business leaders, citizens) to take responsibility, and a commitment to work towards a common goal. The future of business will need to be collaborative and inclusive if we are to address the key global issues we are facing, and use business as a vehicle for positive societal and environmental impact.

Organising this new way of doing businesses requires different leadership and competences. For example, the additional key competencies that sustainability professionals need to enable them to act from a holistic point of view include: (1) systems-thinking competence, (2) anticipatory competence, (3) normative competence, (4) strategic competence, and (5) interpersonal competence (Wiek 2011). People should be able to analyse a problem or opportunity from a holistic perspective (systems-thinking competence); assess the problem and its context comprehensively with respect to sustainability (normative competence); construct non-intervention scenarios about how the problem might play out in the future (anticipatory competence); envision sustainable future states in contrast to the non-intervention scenarios (anticipatory and normative competence); and create intervention strategies to avoid undesirable scenarios and realise sustainability visions (strategic competence) (Wiek 2011). Doing this requires close collaboration with researchers from other disciplines, and with stakeholders in government, the business community, and civil society (interpersonal competence).

In summary, different approaches and methods (learning environments, co-creation, open networks) are needed to solve our future challenges and transform our society. In addition, we need a new form of (personal) leadership (Scharmer, 2009) and, related to this, “presencing”, i.e. realising our full potential in line with societal needs (building on Senge et al., 2005; 2008). The transition to a more sustainable society and industry is happening and, even though it takes effort, resources, and creativity, and is not easily achieved (Crane et al., 2014), we, as individuals, should seize the opportunity to contribute to this positive change.

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